

Recent Advances at the LBNL Nanofabrication Laboratory

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In this talk I will describe two recent advances in nanofabrication. The first is the production of the world's highest resolution zone plates, with an outer zone width of 15 nm and a measured resolution of better than 13 nm. This achievement was made possible by pushing conventional lithographic techniques to their limit. The second is a method of exceeding those limits through directed self-assembly. The example I will describe involves the use of block copolymers to generate patterns that can be significantly smaller than the underlying lithography.